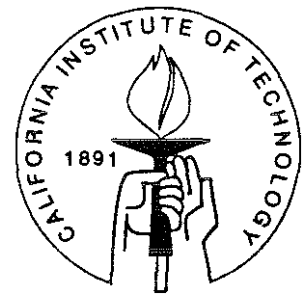


DIVISION OF THE HUMANITIES AND SOCIAL SCIENCES
CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENA, CALIFORNIA 91125

Perception and Misperception: Constituent Knowledge of Their Representative's Persian
Gulf War Vote

R. Michael Alvarez
California Institute of Technology

Paul W. Gronke
Duke University



SOCIAL SCIENCE WORKING PAPER 841

March 1993

Perception and Misperception: Constituent Knowledge of Their Representative's Persian Gulf War Vote

R. Michael Alvarez

Paul W. Gronke

Abstract

Many assert that constituents know little of their elected official's behavior, especially how their representatives have voted on specific legislative bills. When legislation concerns foreign affairs, the prospects for constituent knowledge are usually asserted to be even bleaker. We challenge these assertions. Our challenge is based on an intensive analysis of one highly salient roll call vote: The House and Senate votes on the January 14, 1991 "Use of Force Resolution." Using data from the 1990-1991 Panel Study of the Political Consequences of War we examine constituent perceptions of House and Senate member "Use of Force Resolution" votes. We find that aggregate perceptions of senator votes vary according to the senator's party, his or her tenure and past electoral competitiveness. At the individual level, we find that, while more informed constituents had more accurate perceptions, many less-informed citizens were able to use readily-understandable cues in developing their perceptions.

“I’m losing a lot of sleep over this . . . This is probably the most important vote I will ever cast as a public official, and I don’t want to be wrong.”

Representative Timothy J. Penny,
(D-MN), CQ WR January 5, 1991, page 11,
discussing the forthcoming “Use of Force Resolution” vote.

“I never thought that the first time I would have an opportunity to speak in this chamber the topic would be such a grave topic . . . life and death, whether or not to go to war, to ask America’s men and women, so many of them so young to risk life and limb, to unleash a tremendous destructive power on a foreign country and a far away people. This is the most momentous decision that any political leader would ever have to make and decide we must.”

Senator Paul D. Wellstone,
(D-MN), January 10, 1991, during the floor debate
over the “Authorization for the Use of Force against
Iraq Resolution.”

Perception and Misperception: Constituent Knowledge of Their Representative's Persian Gulf War Vote *

R. Michael Alvarez

Paul W. Gronke

1 Introduction

Like Representative Penny and Senator Wellstone, many member of Congress publicly agonized over their "Use of Force Resolution" votes.¹ During the fall of 1991, public sentiment against Iraq's aggression in Kuwait climbed, and there support grew for President Bush's military buildup in the Persian Gulf. However, there were consistent calls from constituents, and from Democratic party leaders, for continued pressure on Iraq through U.N.-enforced economic sanctions. Thus the dilemma for many lawmakers, especially on the Democratic sides of the House and Senate, was acute.

After eight days of debate, carried live on C-Span, excerpted extensively on the Cable News Network, National Public Radio, public television, and covered in exhaustive detail in both national and local media, both branches voted on January 14. In the Senate, the vote was close, with 52 voting to authorize the use of force and 47 voting against. The

*R. Michael Alvarez is an Assistant Professor of Political Science at the Division of Humanities and Social Sciences 228-77, California Institute of Technology, Pasadena CA 91125. Paul W. Gronke is an Assistant Professor of Political Science at the Department of Political Science, Duke University, Durham NC 27706. This is a revised version of a paper originally presented at the Conference on the Political Consequences of War, The Brookings Institution, Washington, D.C., February 28, 1992. We thank Thomas Mann for sponsoring that conference; John Aldrich, John Brehm, Charles Franklin, Ole R. Holsti, David Legee, Douglas Rivers, and John Zaller for their contributions to our work; and John Boiney and Abby Delman for their assistance. Some of the data used in this paper were originally collected by the Center for Political Studies and Distributed by the Inter-University Consortium for Political and Social Research.

¹The debate over the use of force in the Persian Gulf took place from January 7 - January 14, 1991. The conflict devolved into a choice between authorizing the use of force for only enforcing an economic embargo ("continuing sanctions") versus a more blanket endorsement of the use of force. The resolutions that passed were SJRes2 (the Warner bill) and HJRes62 (the Michel bill); the alternative resolutions were SJRes1 (Nunn/Mitchell) and IJRes62 (Solarz).

vote in the House was not as close, with almost 58% of the House supporting the use of military force against Iraq.²

At the time of the Persian Gulf War vote, there was widespread speculation that the positions taken by many representatives — especially those who opposed the “Use of Force Resolution” — would haunt them in the 1992 elections. But for that to have occurred, three conditions were necessary: the positions of incumbent candidates must be readily known by the electorate; this issue must be salient among voters; and the voters must have used this information when evaluating competing candidates.

At this time, it is not clear what role the “Use of Force Resolution” played in the 1992 elections. Some have hinted that a handful of senators, most particularly Senators Sanford (D-NC) and Fowler (D-GA), may have been hurt by stridently opposing the use of force against Iraq. While this might be true, it is clear that a widespread repudiation of incumbents who voted against the use of force *did not occur*. The aggregate results of the 1992 elections do not support a claim that this particular vote influenced many election outcomes. Of all those who left either legislative branch during the 1992 elections, 50% of the senators and 48% of the House members voted against the “Use of Force Resolution.” These figures change little when we examine retirements, primary losses, or general election losses: in the Senate, 3 of the 7 retiring members voted against the resolution, and 3 of 5 losing an election voted against; in the House, 47% of the retirees, and 49% of the losers, voted against the resolution (of the primary losers, 47% voted against, and of the general election losers, 50% voted against).

This is not surprising, given the conventional wisdom about public opinion and foreign policy. The public has not been accorded much ability or willingness to learn about foreign affairs. The traditional view asserts that the public’s views of foreign affairs are unstable, unstructured, and relatively uninformed. Given that politics is a distant and tangential to most Americans, it is easy to conclude that foreign affairs must be an obscure and unimportant element of the political world. Thus, since public opinion is relatively inconsequential as a guiding factor for elite policy making, the mass public is a force to be led, not followed (Holsti 1992).

There have been challenges to the conventional view. Kinder and Sears (1985) suggest that some foreign events have domestic ramifications: the seizure of the American Embassy in Teheran and the Soviet invasion of Afghanistan might have given Carter the necessary support to beat back Kennedy’s 1980 primary challenge (Kinder and Sears 1985:680). Peffley and Hurwitz (1985, 1992) claim that public opinion on foreign affairs is as stable and structured as opinions on domestic affairs (while acknowledging that the surveys have typically not asked the appropriate questions suitable for rigorous analysis). Aldrich, Sullivan and Borgida (1989), using a model of attitude accessibility, show that when foreign policy attitudes are both available and accessible, foreign affairs opinions influence citizen voting, at least in presidential contests. In their detailed review of historical trends in public opinion, Page and Shapiro (1992) show that public opinion—even

²The House vote was 250 in favor, and 183 against.

on foreign affairs—does respond to real world events and to information presented to the public by political leaders and the mass media. Finally, in both the domestic and foreign policy realm, the public acts as an echo chamber. When distinctive policy positions are articulated by political elites or when there is elite consensus on policy direction, public ignorance and confusion appears to be diminished (Kinder and Sears 1985:663; Zaller 1992:107; Stimson 1990).

These revisions point out that under certain conditions and for certain foreign events, public opinion can be informed, directed, and consequential. This leads us to be optimistic that constituents will both know the positions taken by their representatives on the “Use of Force Resolution,” and that this knowledge will be used in their perceptions of these representatives. We argue that the Persian Gulf War meets these conditions.

First, the conflict was more than a mere foreign policy “event.” It involved a massive commitment of American military forces, an action which historically has had important domestic consequences: “The Korean and Vietnam Wars and the Iranian Hostage Crisis exemplified ‘intermestic’ issues: foreign issues that had a strong domestic component that affected daily life.” (Hess and Nelson, quoted in Aldrich et al. 1989:124). Military commitments can take over political life in the country, pushing aside all other issues. As has been demonstrated with regard to presidential approval ratings, foreign military commitments strongly influence domestic politics (Mueller 1973; Kernell 1978; MacKuen 1983; Hibbs 1987).

Furthermore, coverage of the “use of force resolution” was intense. Zaller (1992: 106) describes the debate over the war resolution as a classic case of elite and public opinion polarization. The Democrats in Congress supported a policy of continuing economic sanctions, while the Republicans joined President Bush in support for a proactive use of military force. So we expect the intense and polarized debate on this issue to lead to heightened public awareness and partisan patterns of response, with Democrats moving more against the use of force and Republicans more in favor. This implies that information about the Gulf War resolution will be partly determined by the partisanship of the individual respondent and the member of Congress.

In this paper, we analyze constituent knowledge of their representative’s vote on the “Use of Force Resolution” in the context of this literature on foreign affairs and public opinion. There are compelling theoretical reasons for focussing on this specific vote. First, we are interested in the political ramifications of this salient and controversial floor vote. Most representatives publicly discussed their positions, and the debate consumed media headlines for weeks. Under these conditions, foreign policy attitudes should be accessible to citizens, and influential in their political perceptions (Aldrich et al. 1989).

Second, this is a very specific attitude — direct knowledge of a single roll call vote. Most research on foreign policy attitudes (and on policy attitudes in general), focuses on broad issues like changes in defense spending, relations with other nations, or the threat of nuclear war. It is difficult to assess the level of individual knowledge, and whether an individual holds actual opinions, about such issues. There are no available

yardsticks which researchers can use to judge citizen knowledge. In our case, we possess a precise yardstick: the representative's roll call vote. Combining that information with constituent perceptions of the roll call gives us a unique chance to understand foreign policy attitudes and political opinion formation more generally. This puts us in an excellent position to understand perceptions, since we have accurate and objective information about the positions of the representatives on this particular issue, unlike the research on broader issues which employ less accurate, more subjective measures of the representative's positions (Powell 1989; Franklin 1991; Alvarez and Franklin 1992).

Third, almost all work focuses on the influence of foreign policy attitudes on presidential approval or elections, or on executive branch decision making (e.g., Mueller 1973; Graham 1989; Aldrich et al. 1989). Few studies examine the effects of foreign policy opinions on congressional elections or decisionmaking, despite work by Bartels which "suggests that public opinion was a powerful force for policy change in the realm of defense spending in the first year of the Reagan administration" (Bartels 1991:467). Understanding the constituent's knowledge of their representative's behavior has important ramifications for models of the constituent-representative relationship.

The remainder of this paper is organized into three sections. In the next section, we discuss the survey data and analyze the accuracy of constituent perceptions in the aggregate. We propose and test a perceptual model that draws upon a set of contextual and ideological indicators for Senators. Then we disaggregate the survey data, and present models of accuracy for those who claim to know the representatives' votes and those who were willing to guess the representatives vote. We close by discussing the implications of our results, particularly for research on citizen understandings of representative's positions and on foreign affairs opinions.

2 The Use of Force Resolution: A First Look

In this paper, we rely on questions contained in the National Election Studies' 1990-1991 Panel Study of the Political Consequences of War/1991 Pilot Study. A brief discussion of the questions and the responses they elicited is in order, since they differ in some respects from the usual NES questions about respondent knowledge of their representatives. The specific questions we examine in the remainder of this paper concern a respondent's recall of how her House and Senate representatives voted on the "Use of Force Resolution" on January 14, 1991. Each respondent in the 1991 survey was presented with two questions for each of her three congressional representatives. The wording of these questions appears in the appendix.³ Respondent accuracy rates, calculated as the percentage who

³The questions for the House members were asked first, followed by questions for one senator (denoted by the NES as Senator 1) and then the other senator (Senator 2). There was no particular pattern we could ascertain in the placement of senators into either set. We uncovered an unusual problem associated with the two-senator structure: a response-set bias exists in the data since. As we show below, respondents are more accurate in their perceptions of "Senator 2," even after controlling for a number of independent variables. Another problem in the survey data centered around a summary

“recalled” or “guessed” the representative’s vote on the Use of Force Resolution correctly, are given in Table 1. In this table, the columns give the percentages of responses, correct responses, false positives, and false negatives, for four sets of representatives: House members, all senators (“stacked dataset”), and the two senators from each state as categorized by the NES.⁴

The first row of Table 1 accords with the conventional view of foreign affairs opinions and knowledge of representatives’ roll call votes. Only 24% of the 1991 panel respondents claimed to be able to recall their House member’s vote while 27% claimed recall of their senator’s vote. This holds an important implication: less than six months after this politically contentious and well-covered floor vote, roughly three-quarters of respondents *could not recall the vote of their representatives*.⁵

Is it reasonable to stop with these figures, and conclude that constituents are poorly informed about foreign affairs? In two recent national post-election surveys (1988 and 1990), the NES has asked each respondent whether they recalled her House member’s vote on any bill in the past few years.⁶ In 1988, only 10.7% of respondents, and in 1990 11.1% of respondents, said they could recall *any roll call vote*. The fact that over twice as many respondents stated they could recall the “Use of Force Resolution” vote strikes us as an important difference.

Also, the response marginals for the next two questions (data not shown in Table 1), asking for the respondent’s recall or guess of the representative’s vote, indicate a high level of public awareness and knowledge of the “Use of Force Resolution”, even among those who stated no recall of their representative’s vote. Of those who stated they knew their representative’s vote, over 99% were willing to state that the representative had voted for or against the resolution. Among those who did not recall, 84.6% of the respondents were willing to guess their House member’s position, and 85.4% and 86.3% were willing to guess their senators’ positions. Both of these points caught our attention since we were surprised by what appears to be an extremely high level of public awareness and knowledge of the “Use of Force Resolution” vote, even among those who stated that they

variable the NES prepared that aggregates “recall” and “guessing.” We show shortly that it is misleading to lump two very different respondent groups into a single variable, given the great heterogeneity across “recall” and “guessing” rates. In data not shown here, it is also apparent that the rates of “recall” and “guessing” vary dramatically across individual senators.

⁴In the remainder of this paper we report results based on analyses of the stacked senator dataset. Stacking the senator dataset creates two observations for each respondent, one for the first senator, another for the second. This doubles the sample size of our dataset, thereby increasing the efficiency of our estimates. This procedure also risks introducing heteroskedasticity into our analyses, since it is likely that error terms for a particular respondent are correlated across the two observations. The same phenomenon is likely to arise in our aggregate models. Accordingly, we use heteroskedastic-consistent standard errors in models involving stacked senator data.

⁵Note that the first row of each panel in Table 1 includes 25% of the California sample who claimed to know how Alan Cranston voted, and 97 who were willing to guess, even though Cranston did not vote on the war resolution!

⁶In both the 1988 and 1990 post-election surveys, the NES posed an identical question to respondents: “Was there any bill in particular that you remember how (*he/she*) voted on in the past few years?”

could not recall their representative's vote. Perhaps public awareness of this vote was considerable.

To get a better understanding of the pattern of knowing and guessing, we compared the respondent's recall or guess of the representative's vote with the actual roll call votes of each member. The percentages of correct recalls and guesses are in the second and sixth rows of Table 1. The first point to notice is that accuracy rates are approximately 17% higher for those respondents who recalled the war vote relative to those who guessed. But how accurate should respondents be? The relevant standard for these figures is not complete inaccuracy, since independent random guesses would have resulted in 50% accuracy rates. By this standard, guessers do not do much better than simple random guessing (10.5% in the House and 8.8% in the Senate), while those who recalled the representative's vote performed much better (27.5% in the House, 25.5% in the Senate). Clearly, knowing versus guessing is a meaningful distinction.

The second observation to take from Table 1 is the clear differences between House and Senate members. In the House, the false positives and false negatives are evenly balanced, implying that respondents were just as likely to mistakenly say that their House representative voted against the resolution as to say their House member voted for it. Senators were perceived differently: false positives are almost *three times as likely* among those who recalled the Senator's vote and *two times as likely* among those who guessed. Senators were perceived as substantially more supportive of the use of military force in the Persian Gulf than House members, even though the vote in the House was more supportive of the "Use of Force Resolution" (64% support) than the Senate (53% support). The combination of partisan and institutional cues led to an interesting pattern. There is substantial partisan tilt among guessing across both institutions — accuracy rates were 21% higher among respondents who *guessed* at Republican versus Democratic Senators' positions (71% versus 50%). The House comparison is almost identical (a 14% partisan tilt; 70% versus 56%). Among those who *recalled*, by contrast, partisan tilt is only apparent in the perceptions of Senators. While 22% more recalled their Republican Senator's position accurately (88% versus 66%), the gap in the House was minimal (only 8%; 83% versus 75%). These are noteworthy institutional differences.

Finally, notice that accuracy rates are higher for Senator Two than for Senator One. This is particularly obvious among those who recalled the Senator's vote (14% greater). This is true despite virtually identical rates of false positives and negatives. These differential accuracy rates might have two sources. First, they might be caused by systematic differences in the Senators who were in the first or second category: that is, there might be something which systematically made it easier for respondents to accurately recall or guess the positions of the second Senator relative to the first.⁷ Secondly, these differences might be a simple response-set problem. Here, the simple stimulus of recalling or guessing the position of the first Senator might have led to more accurate recalling or guessing of the second Senator. It is to this question, accounting for the variance in

⁷However, as mentioned above, we could not discern any reason for the placement into "Senator One" or "Senator Two". (It is not a function of year of election, tenure, or party).

accuracy rates across the Senators in this sample, that we now consider.

3 An Aggregate Model of Perceptual Accuracy

A skeptical reader of Table 1 might conclude that constituents are poorly-informed about both foreign affairs and the positions of their representatives on such policy matters. Additionally, another reading might be that irregardless of the percentages we just reported, these survey questions are eliciting “non-opinions” rather than actual perceptions (e.g. Converse 1964; Achen 1975).

How can we discount these claims? Others have dealt with similar critiques in past research. Conover and Feldman (1989) attempted to reconcile the willingness of respondents to place candidates on a variety of issues and the seeming lack of information pertinent to make such placements. They approached the problem by examining the information and the cognitive processes that respondents employed in order to place the candidates. A respondent’s placement of a candidate on an issue turned out to be a function of individual (the respondent’s own position on the issue and their evaluation of the candidate) and contextual (candidate positions, party positions, and media coverage) elements.

Powell (1989) took a similar approach in trying to understand the cognitive process respondents used when they placed members of Congress on the liberal/conservative scale. Powell went one step further, however, considering the *accuracy* of the placements as well as the process that generated the placements. Powell found that those who inferred or “guessed” the representative’s position differed from those who were more informed on various individual-level dimensions (education, age, gender, and length of residence).⁸ While contextual information (incumbent seniority) did not influence the probability of guessing the incumbent candidate’s position, electoral competitiveness did influence guessing the challenger’s ideological positions.

A slightly different approach was developed by Franklin (1991). He argued that the process of candidate ideological perception has three components: information about the candidate, information used to infer characteristics of the candidate, and the voter’s own preferences. Respondents utilize contextual, inferential, and personal preference information when stating their representative’s ideological position. The accuracy of their perception is contingent on the respondent’s sophistication, electoral competitiveness, and issue-information derived from the campaign.

We draw upon this literature to examine the accuracy of citizen perceptions of the “Use of Force Resolution” votes of the incumbent Senators in our sample.⁹ Our model

⁸In Powell’s definition, “guesses” are “estimates unrelated to the candidate’s true position on the scales, which have now been established by the relationship between the ACA score and the knowledgeable contributor’s placement” (Powell 1989: 279).

⁹It is not possible to replicate this analysis for the House. Unfortunately, there are too few respondents

of perceptual accuracy is different from those just discussed, particularly since we are studying accuracy rates for Senate incumbents *on one roll call vote*, not on a more general liberal/conservative dimension. This is useful since we have a precise measure of accuracy — whether the respondent recalled or guessed the vote correctly.¹⁰ Our model is similar in that we assume perceptual accuracy is driven by both contextual and individual information. In this section we discuss the contextual determinants of perceptual accuracy across Senators, and in the next section we generalize our approach to an individual-level model of perceptual accuracy.

There are four dependent variables in this analysis: the percent of respondents who stated they recalled the Senator’s war resolution vote, who correctly recalled the vote, who correctly guessed the Senator’s vote, and who correctly recalled or guessed the vote. The independent variables were culled from the past works we just discussed, and measure the senator’s ideological extremity, party affiliation, length of tenure, years since last elected, and previous electoral competitiveness. Operationalizations of each variable appear in the appendix.¹¹

Consider the model for the percent who recalled the war vote of each Senator (column one of Table 2). The reported R^2 for this model is quite low (0.14), showing that this model does not account for much of the variation in rates of recall across Senators. Of the substantively important independent variables, only two reach reasonable levels of statistical significance: the Senator’s tenure (significant at the $p = 0.05$ level) and the Senator’s party (significant at $p = 0.10$, both one-tailed tests). The estimated coefficients are also correctly signed. The tenure coefficient is positive, meaning that greater percentages of respondents could recall their Senator’s vote the longer Senator had been in office. The impact of this variable is sizeable: 10 more years of tenure is associated with a 4.4% increase in the percentage of respondents who stated they could recall the vote, *ceteris paribus*. The estimated coefficient on party affiliation is negative, implying that fewer respondents recalled the war resolution vote when their Senator was a Democrat than when the Senator was a Republican; in fact, a Democratic Senator has an estimated 4.1% fewer respondents recalling their vote than a Republican Senators, *ceteris paribus*. Respondents have more difficulty recalling the votes of *less-tenured and Democratic* Senators, the first since they have less information about junior Senators, and the second since the vote split the Democratic party in the Senate — with some voting for the resolution and some against.

in each congressional district to compute reliable percentages. The working sample size within each of the 122 congressional districts in the 1990-1991 Panel Study averages 22.78, with standard deviation of 22.6. The largest sample is 90; the smallest sample is 1. 41 of the district samples are smaller than 10. Over one-third of congressional district samples are clearly too small to produce reliable percentages. By contrast, the state samples average 91.3 cases; the three smallest state samples are 34, 40, and 56.

¹⁰The other models relied upon interest group ideological ratings as baselines to measure perceptual accuracy, which are not as precise a procedure.

¹¹All variables are from Politics in America, 1992. We added a dummy variable in these models to account for heterogeneity in responses to these questions across the two Senators for each state, coded 1 for the first senator and 2 for the second. Last, we estimate heteroskedastic-consistent standard errors (White 1980) which alleviate the problems of heteroskedasticity in our data. All of the multivariate models reported in this paper were estimated using SST, Version 2.0 (Dubin and Rivers 1992).

Next, consider the results for recall and guessing, reported in the second and third columns of Table 2. Both these models fit the data much better, with R^2 values of 0.44 (correct recall) and 0.31 (correct guessing). These models account reasonably well for the variation in percentages of those who recalled and guessed the votes of Senators. More importantly, there are explicable patterns of perceptual accuracy among those who recalled and those who guessed. However, only one variable in the recall equation reaches statistical significance: party affiliation of the Senator. The negative sign of the estimated coefficient indicates that the percentages of correct recalls were *lower* for Democrats than for Republicans, similar to the effect of party on the ability to recall. In contrast, though, notice the magnitude of this effect: after controlling for the effects of electoral competitiveness, tenure, and ideological extremity, the percentage of respondents who correctly recalled the vote of a Democratic Senator was 24% lower than for a Republican Senators.

In the model predicting correct guessing (third column of Table 2), the two electoral variables meet conventional statistical significance levels, along with partisanship. The effect of party affiliation is still negative, but is not as substantial as in the correct recall model: the percentages of respondents who correctly guessed the Senator's vote were 17.8% lower for Democrats than Republicans, a difference of 6.2%, *ceteris paribus*. The estimated effects of the time since the Senator last stood for election and the Senator's margin of victory in the previous election are both negative. This means that, controlling for the other variables in the model, respondents could more accurately guess the roll call position of Senators who had more recently stood for election and who had ran in a more competitive race. A one-unit change in the estimated effect of the time since the Senator last stood for election is associated with a 2.6% fall in the percentage of correct guessing. A Senator who stood for election in 1988 would have 5.2% fewer constituents who correctly guessed their vote relative to a Senator who stood for election in 1990 and a Senator who stood for election in 1986 would have 10.7% fewer constituents correctly guessing their vote relative to a Senator who stood in the 1990 election. A one-unit change in the Senator's last electoral percentage yields an estimated drop in the percentages of correct guessing of 0.34%. *Prima facie*, that seems like a small effect. However, compare a Senator who won in the last election with 51% of the vote and one who won with 61% of the vote. The latter Senator — who was clearly in a less competitive election — would have 3.4% fewer respondents who correctly guessed their "Use of Force Resolution" vote. Clearly the effect of electoral competitiveness is not as strong as either party affiliation nor the length of time since their last election.

These regression results lead to a number of important conclusions. First, and most importantly, we find systematic patterns across Senators in the aggregate percentages of recall, correct recall, and correct guessing, thereby providing strong evidence that respondents are not answering these questions randomly. Our models suggest, in fact, that contextual information about these Senators undergirds the response patterns to the questions concerning the "Use of Force Resolution." Second, we have found that it is *partisan and not ideological* information which accounts for variations in accuracy rates. Our results stand in contrast to the work of Conover and Feldman (1989) and

Franklin (1991), who both argued that ideological cues figured prominently in voter inferences about their representatives. Of course the work of Conover and Feldman and Franklin does concern ideological placements, while ours is concerned with actual roll call votes. Third, our results support Powell's findings regarding guessing. In our model of the percentages of correct guessing, we found, like Powell, that perceptual accuracy is dependent upon electoral competition and not necessarily on length of tenure.

Our results differ from Powell's in an important respect. In our recall model, we find that that electoral competition did not matter; only partisan information accounted for variation across Senators in the rates of correct recall. Our inference regarding the differences in the effects of electoral competition across our two models is that the processes of accurate recall and accurate guessing are distinct. Respondents who are guessing are relying upon information obtained during recent electoral campaigns, whereas those who recall draw upon more longstanding bases of information about the candidates and the meaning of the two parties. At the very least, party differences on the "Use of Force Resolution" served as a perceptual aid to those who claimed to recall the vote. Since we are ultimately concerned with perception and misperception at the individual level, we now turn to individual-level models of recall and guessing.

4 Individual-Level Perceptions of The Use of Force Resolution

Models of political perceptions focus on the interaction between individual ability and desire to learn about politics, and the way the political environment supplies information. Political sophistication plays a central role in individuals evaluation of political candidates (Rahn 1990; Rahn, Aldrich, Borgida and Sullivan 1992; Lodge, McGraw and Stroh 1989), the susceptibility of individuals to "priming" (Iyengar and Kinder 1987; Krosnick and Kinder 1990), and more broadly the way that individuals respond to political stimuli (Zaller 1992). Politically sophisticated individuals have schemas or knowledge structures that allow them to more quickly understand and incorporate new information into preexisting belief systems. Frequency of exposure also affects the likelihood that a message will be incorporated. Mass media usage, for example, increases the likelihood that individuals learn about political events (Zaller 1992; Iyengar and Kinder 1987). Finally, perception depends on the interaction between the credibility of the source, the direction of the message, and the individual's prior held beliefs (Franklin 1993; Zaller 1992; McGuire 1969; Sherif and Sherif 1967).

Accordingly, we hypothesize that political learning and information about the Gulf War Resolution is a product of two sets of variables. The first reflect individual characteristics: the individual's level of political information, media exposure, and interest in the Gulf War conflict. The second reflect a combination of individual characteristics and cues from the political environment. These include agreement or disagreement between the individual and the House member or Senator, evaluations of the representative, and a

set of interactions between individual attitudes and characteristics of the representative or Senator, such as partisan or ideological agreement. We also include in this third set of variables, a set of contextual measures that function as inferential cues for respondents. In the context of the war resolution vote, we suppose that respondents might rely on broad characteristics of the Senator or House member that indicate how they voted, rather than learning all the specifics of this issue. The kinds of cues that respondents might use correspond nicely to the predictors used in our aggregate model.

The likelihood and accuracy of recall depends first on the respondent's political sophistication. Following recent research on what voters know of the positions of candidates on political issues (Alvarez 1992; Alvarez and Franklin 1992; Franklin 1992; Powell 1990; Bartels 1986), we argue that individuals who score highly on indices of education, political information, media attentiveness, and political efficacy, should be substantially more likely to recall their representative's vote and to recall or guess that vote correctly. We add a measure of salience. As implied by RePass (1971) and Aldrich et al. (1989), and by the cognitive models outlined above, the salience of the issue should influence the amount of information the respondent possesses about this issue.¹²

We also need a measure of message discrepancy and source credibility (Franklin 1993). Ideally, we would have a measure of media coverage during the war resolution debates, and could interact this measure with the respondent's reported opinion about involvement in the Gulf (measured in early 1990, before the U.S. had sent troops). Since we do not have media content measures, we rely on a set of surrogates. A measure of source credibility is available from the NES study: the individual's evaluation of the representative. We hypothesize that voters will recall more accurately the positions of members who they evaluate more highly. For measures of message discrepancy, we interact the individual's partisanship with the member's partisanship, and the individual's attitude toward the Gulf conflict with the individual's *perception* of the position taken by the member. Therefore, we add to these models the respondent's own evaluation of the importance of the Gulf War, the respondent's evaluation of the performance of the House member or Senator, and an interaction variable, coded 1 if the respondent's position and the perceived position of the representative were in agreement, 0 if they were in disagreement.¹³ We predict that individuals who were particularly approving of the performance of their representative, and who agreed with their elected representatives would be more likely to recall, and to recall or guess correctly, the war resolution vote.

The prediction in both cases is the same: respondents who are of the same partisan leanings and who perceive agreement between themselves and the member on the Gulf

¹²There is a second dimension of salience, specific to the importance of foreign military interventions to individual respondents. Like models of economic evaluations and voting, it is possible that those who were personally affected by the war — those with relatives or friends who served in the conflict — might follow the war vote more closely than those without this personal connection to the war. However, there was no evidence of such an effect in our initial models, and accordingly, the data do not support such a "personal" effect upon respondent knowledge of representative voting.

¹³We do not have a measure of the partisan and ideological bias in the messages that respondents received (Zaller, 1992). Evaluation and agreement are intended to be surrogates.

issue will be more likely to recall, and recall and guess accurately.

Finally, we allow for the possibility that respondents might use simplifying cues when answering these questions. We include the aggregate measures from the previous section, under the assumption that recall rates also depend on how much past experience the individual has with the member (tenure), how recently the candidate had to stand for reelection (last election, only applicable to the Senate), the intensity of recent campaign exposure (electoral margin), and whether a member is ideologically extreme, and therefore easy to predict, or falls into the midrange of ideology.

These models were estimated via maximum likelihood probit. The dependent variables were (1) whether the respondent stated recalling the representative's war vote (all respondents); (2) whether the respondent recall of the representative's war vote was correct (only for those who claimed to recall); and (3) whether the respondent's guess was correct (only those who guessed).¹⁴ We refer to these models as "Ability to Recall", "Accuracy of Recall", and "Accuracy of Guess".

5 Information, Interest, and Individual Perceptions of the Gulf War Vote

Probit estimates are reported in Table 3 (ability to recall), Table 4 (accuracy of recall), and Table 5 (accuracy of guess). We report the models for the House and the pooled Senate data.¹⁵ Due to the non-linear nature of the probit model, it is difficult to interpret the maximum-likelihood estimates directly (Aldrich and Nelson 1984; King 1989; McCullagh and Nelder 1991). To aid the interpretation of the *magnitude* of the estimated effects of each independent variable we present in each table the "first differences" for each probit model in the columns headed by \mathcal{D} . These "first differences" give the magnitude of the estimated effect of the particular variable, holding the other variables constant at some value.¹⁶

We predicted that political sophisticated respondents should be more likely to recall,

¹⁴See the Appendix for NES variable numbers and recodes. As discussed in the previous section, a dummy variable for the positioning of each Senator from each state (either 1 or 2) is included to eliminate the heterogeneity which is apparent in the response patterns for these survey questions between the two Senators.

¹⁵The disaggregated Senate data does not produce results much different than those presented here, except for a decrease in the efficiency of the estimated standard errors.

¹⁶The "first differences" were obtained by holding the individual-level voter variables constant at their mean values (these variables are media attention, political information, efficacy, and education), all of the dummy variable were set to one (representative evaluation, agreement with position, salience of issue, partisan agreement, and ideological extremity), tenure was set to two, electoral margin to 51 (and for senators, last election to 90 and senator number to one). Then the effects of each variable were determined by calculating the probability that such an individual would have stated the particular response (recalled, recalled accurately, and so on) at the minimum value of the indicator and at the maximum value of the indicator. The difference between these two values constitutes the "first difference".

and more accurately recall (or guess), the representative's vote. These expectations are generally met in the three models. Of the eighteen coefficients (media attention, political information, and education, House and Senate, across three models), eleven are correctly signed, and nine are both correctly signed and statistically significant. Only three coefficients are both incorrectly signed and discernably different from zero. But note the consistently strong effect of political information on ability and accuracy. The coefficients on the political information variable are always correctly signed, and five of six estimates are discernably different from zero. As given by the "first differences," moreover, the effects of political information are quite sizeable for both the ability to recall, and the accuracy of recall. These results indicate that political information does function as predicted by the political cognition model, even in the case of a relatively difficult test like recall of a specific roll call vote. A more informed individual is more able to recall the representative's war resolution vote, and is more accurate when either recalling or guessing.

The cognitive model also predicts that the individual's attitude toward politics generally, and their interest in the war vote in particular, will increase the likelihood that the respondent would attend to political information. The results here lend weak support to our hypothesis. Salience has a strong impact on the probability that a respondent would recall the gulf vote (see Table 3); however, salience has a statistically insignificant effect on the probability of correct recall or guess. Individuals who identified the war as a particularly salient event were more confident in their ability to recall the position of their representative on the war vote. This confidence may have been misplaced, however; these same respondents were no more likely to recall or guess correctly. The estimated coefficients on political efficacy follow a similar pattern; the coefficients are statistically significant in the ability to recall model, but not in the correct recall or correct guess models. These results indicate that political efficacy has little impact on the likelihood that a respondent attended to information about the Gulf War. Public interest in this event was generally high, independent of an individual's level of political efficacy.

Our individual level variables operated much as we expected. Political information is the best predictor of the probability that a respondent would be able to recall, and whether the recall or guess was accurate. Media attention also appeared to increase the respondent's likelihood of recalling, but did not affect the accuracy of recalls or guesses. Education also had a mixed effect, influencing mainly the accuracy of recall and guessing, and not the ability to recall.

6 The Political Environment and Individual Perceptions of the Gulf War Vote

The respondent's ability to recall the Gulf War vote also depends on the content of political messages and the existence of inferential cues. We tested the impact of two sets of variables. The first set represent source credibility, under the assumption that individuals

learn more when they like, trust, and agree with the source of the message. Citizens who were self-identified Democrats ought to recall the Gulf War vote of Democratic members of Congress more frequently and more accurately, and vice versa for Republicans. Similarly, respondents will be more likely to recall, and will recall more accurately, when their own position on the use of force matched their representative's position and or when they evaluated their member positively. The second set of variables reflect the possibility that there are inferential cues which individuals might use to infer the representative's position: the member's tenure and ideological extremity, the time since the last election, and the closeness of the last election. We predict that respondents will have more accurate recall when their representatives have a long history in the district; similarly, recent and intense elections increase the likelihood that the respondent was exposed, and will be able to draw upon, political information about the member. Finally lacking other information, respondents will be more able to recall or guess at the positions of members who stand at ideological extremes.

The results support our hypothesis regarding the impact of recent elections. Respondents from states with a more recent Senate election are more likely to recall, and make more accurate recalls and guesses. Contrary to our expectations, however, electoral margin has an inconsistent impact on perceptions of the war vote. While increased vote totals were negatively associated with the accuracy of guessing the Senators' and House member's positions, as predicted, margins are positively associated with accuracy of recall and ability to recall (compare Table 5 to Tables 3 and 4).

Our hypotheses regarding tenure and ideological extremity also receive little support. In only one of six cases is the ideological extremity estimate statistically significant and positive, the House model for accuracy of guessing. The tenure coefficients, on the other hand, reach reasonable levels of statistical significance in five of six models (all but the accuracy of guessing the Senator's vote). However, the signs of the coefficients show different effects in the ability to recall model, where the more tenure a House member has, the less likely the respondent is to recall the vote (3% less likely on average); but the more tenure a Senator has, the more likely a respondent is to recall the vote (also 3% more likely). Yet in both accuracy models the tenure coefficient has a negative sign, showing that incumbents with shorter Washington experience are more likely to have respondents who accurately perceive their roll call votes.

The only other variable that has a significant effect on the probability of correct recall is partisan agreement. In the ability to recall model, the results for the House are the opposite of what we expected: *ceteris paribus*, respondents are 6% less likely to recall the position of their representative when they are members of the *same* political party. On the other hand, *accuracy* of recalls and guesses is positively associated with partisan agreement, as predicted (except for the small and statistically insignificant coefficient in the accuracy of recall model for the Senate).

What do these results indicate? We identified a series of aggregate measures that helped us explain variations in recall at the state and congressional district level, yet the same indicators give mixed signals at the individual level. These results imply that the

relationship between the political environment and individual cognition is more complex than we have modelled here. In particular, the process of claiming to recall (Table 3) and the processes of stating the representative's position (either as recall or guess), are clearly distinct. Contextual cues appear to be more important in the latter process. For example, consider the relationship between tenure, electoral margins, and recall. Respondents may know more about junior members because they, on average, are more active in the constituency and experience more competitive elections. Similarly, respondents may think they recall the positions of Senators who faced close elections simply because those elections were more intensely fought (leading to a negative relationship between margin and recall in Table 3). Accuracy of recall and guessing, on the other hand, may depend more on longstanding ties that the members have with the constituency — exactly the kinds of ties that are associated with large winning margins (thus explaining the positive relationship in Tables 4 and 5). Partisan agreement helps a respondent infer the position of a member, both as a recall and a guess, but works against the probability they will claim to recall the position in the first place.

These individual-level models lead to a number of conclusions. The first is that the amount of information a respondent possesses, or more generally their political sophistication, influences their perceptions of this roll call vote. Secondly, in none of these models did ideological information have a significant influence; instead, partisan cues were given more weight. Third, typically the greater the representative's tenure, the less likely it was that a respondent recalled, and recalled or guessed accurately, the representative's vote. This implies that as representatives establish Washington careers, respondents are less able to recount their behaviors. This is in line with Fenno's description of the function of the trusting relationship that longstanding members try to establish with their constituency. Trust allows representative's greater leeway to vote independently of their constituency (Fenno, 1978). The implication is that citizens know less about specific votes. Last, the effects of electoral competitiveness seem to be more pronounced for respondent ability to recall information about their Senate, and not their House, representatives. This might be the lingering influence of differences between Senate and House races, or it might be due to the heightened degree of competitiveness in Senate elections.

7 Conclusions

The research presented in this paper sheds light on two important questions — what citizens know about foreign affairs and what citizens know about the behaviors of their elected representatives. Our analysis of respondent knowledge of this one particular roll call vote has shown first that respondents can have significant and substantive knowledge about foreign policy events. Admittedly, foreign affairs are usually not important to the American public. Yet we have argued that under certain conditions, which were met regarding the Persian Gulf War, circumstances allow for substantial amounts of information to be presented to the public, and for that information to be received and incorporated into their perceptions.

Secondly, citizens do have information about the voting behavior of their House and Senate representatives. At first blush, the percentages willing to recall this vote, and the accuracy rates of those who recalled or guessed the vote, might seem small. Yet when compared to more general responses to roll call voting questions in other surveys, these percentages are large. Of more importance, though, is the fact that the aggregate and individual-level patterns in these responses are not random, which provides strong evidence that these questions have not elicited simple “non-attitudes.”

Perceptions vary systematically across representatives and respondents. We have shown that the important covariates encompass political sophistication and attitudes at the individual-level, and contextual information about the representatives at the aggregate level. Therefore these perceptions, while rooted in the cognitive processes of citizens, do have their bases in the political world: that is, they are based on objective information obtained from the political environment.

Of course, these conclusions arise from intensive analysis of only one roll call vote. However, we feel this approach to understanding the political perceptions of respondents is exceptionally important, since in contrast to previous work, we compare the perceptions of respondents to the actual events occurring in Congress. This is superior to previous work which has relied upon more general perceptions and less accurate “yardsticks.” Thus, it would be fruitful for other analyses to supplement ours, examining the perceptions of representative actions across different policy issues, for example. In this way we will obtain a more realistic and nuanced portrait of citizen perceptions and misperceptions.

Appendix

1. Question Wording

- Do you remember how **Representative Name**, your representative in the U.S. **House of Representatives or Senate**, voted on the use of force in the Persian Gulf?
- (IF YES) did (he/she) vote for or against the use of force?
- (IF NO) would you guess that (he/she) probably voted for or against the use of force?

2. Variable Coding

The variables in the aggregate models defined and operationalized:

- **Ideological Extremity**: coded 2 if the Senator was either extremely conservative (0 through 25) or liberal (75 thru 100) on the Americans for Democratic Action scale, 1 if the Senator was moderate (26 through 74);
- **Party Affiliation**: 1 for Democrats, 0 for Republicans;
- **Tenure**: number of terms the Senator has been in office;
- **Last Election**: the number of years since the Senator last stood for re-election;
- **Electoral Percentage**: the percentage of votes the Senator received in that last election.

The independent variables in the individual level models defined and operationalized:

- **Media Attention**: an additive index from v63, v65, v67, v71, and v72.
- **Political Information**: an additive index following Zaller (1986a, 1986b). Constructed from indicators of respondent ability to rate political figures; ability to identify the role of obscure political figures; ability to identify the party in control of the House and Senate; ability to identify the House incumbent in their district; willingness to place themselves on four seven-point scales; and placement of the Democrats to the left of the Republicans on the same four scales.
- **Political Efficacy**: an additive index from v504, v505, v506, v507 which ranges from 1 to 0.

- **Partisan Agreement:** coded 1 if the respondent and the representative were of the same party affiliation, 0 if not.
- **Respondent's Education:** taken directly from v557.
- **Respondent's Evaluation of Representative:** coded from feeling thermometers; 1 if thermometer rating was greater than 60, 0 otherwise.
- **Salience of War:** taken from v2409, and coded 1 if the war was extremely or very important to the respondent, 0 if somewhat or not important.
- **Agreement with War Vote:** coded 1 if the respondent was in favor(against) of the use of force and they perceived the representative to be in favor(against) the use of force, and 0 if there was disagreement.
- **Ideological Extremity:** coded 2 if the Representative was extremely conservative (0 through 25) or liberal (75 thru 100) on the Americans for Democratic Action scale, 1 if the Senator was moderate (26 through 74);
- **Tenure:** number of terms the representative has been in office;
- **Last Election:** the number of years since the member last stood for re-election (only Senators);
- **Electoral Percentage:** the percentage of votes the representative received in the last election.

Table 1: Respondent Accuracy By NES Response Groups

	House	Stacked Senate	Senator 1	Senator 2
<i>R Recalls Vote</i>				
Percent of Sample	24.2	26.9	25.9	27.9
Percent Correct	77.6	75.5	68.0	82.4
False Positives	50.7	73.2	73.0	73.4
False Negatives	49.3	26.8	27.0	26.6
<i>R Guesses Vote</i>				
Percent of Sample	64.0	57.1	62.4	55.5
Percent Correct	60.5	58.8	57.0	60.5
False Positives	52.9	67.0	68.8	64.8
False Negatives	47.1	33.0	31.2	35.2

Note: Percentages of respondents in 1991 sample who answered war resolution questions and whose representative voted on the resolution. The top half of the table gives percentages for those who “recalled” the representative’s vote, and the bottom half, those who “guessed.” Percent of sample is the percent of respondents giving valid answers. Percent correct is the percent who correctly stated the representative’s vote. False positives are calculated: from the total respondents giving an incorrect answer:

$$\frac{\%False\text{“Y”}}{\%False\text{“N”} + \%False\text{“Y”}}$$

False negatives are calculated similarly.

Table 2: Aggregate Models of Senator War Resolution Voting
Dependent Variables (Percent of Respondents):

Independent Variables:	Able to Recall	Correct Recall	Correct Guessing	Correct Recall or Guess
Constant	23.7** (12.6)	98.1** (20.8)	94.1** (13.0)	90.3** (11.9)
Ideological Extremity	0.003 (0.005)	0.006 (0.006)	-0.005 (0.006)	-0.0007 (0.005)
Party	-4.1* (2.8)	-24.0** (3.9)	-17.8** (4.1)	-20.2** (3.5)
Tenure	0.44** (0.23)	-0.47 (0.4)	-0.06 (0.4)	-0.28 (0.34)
Last Election	-0.89 (1.1)	-0.01 (1.3)	-2.6** (1.3)	-1.5* (1.1)
Electoral Percentage	-0.04 (0.16)	-0.30 (0.37)	-0.34** (0.17)	-0.23* (0.16)
Senator Number	5.8** (3.3)	8.6** (4.4)	3.4 (4.9)	5.3* (4.1)
R^2	0.14	0.44	0.31	0.41
S.E.	10.7	17.1	16.3	14.2

Entries in the table are ordinary least squares regression coefficients, with their heteroskedastic-consistent standard errors below. * indicates statistical significance at the $p = 0.10$ level and ** indicates significance at the $p = 0.05$ level, both one-tailed tests. Variables are defined and operationalized in the Appendix.

Table 3: Probability of Resolution Vote Recall
Dependent Variable (Ability to Recall Vote):

Independent Variables:	House	\mathcal{D}	Pooled Senate	\mathcal{D}
Constant	-3.02** (0.35)		-6.56** (1.89)	
Media Attn.	1.25** (0.20)	0.36	1.05** (0.13)	0.39
Pol. Info.	2.24** (0.34)	0.57	1.98** (0.22)	0.64
Efficacy	0.31* (0.20)	0.11	-0.28** (0.14)	-0.11
Education	-0.01 (0.02)	-0.06	-0.006 (0.01)	-0.04
Evaluation	0.17** (0.09)	0.05	0.06 (0.06)	0.02
Agreement	0.05 (0.09)	0.02	0.28** (0.06)	0.11
Salience	0.18** (0.09)	0.06	0.16** (0.06)	0.06
Party	-0.18** (0.09)	-0.06	-0.008 (0.06)	-0.003
Ideol. Extreme	-0.06 (0.09)	-0.02	0.02 (0.06)	0.008
Tenure	-0.009* (0.006)	-0.03	0.007* (0.004)	0.03
Last Election			0.04** (0.02)	-0.06
Electoral Margin	0.003 (0.003)	0.05	0.006* (0.003)	0.12
Senator Number			0.19** (0.07)	
-2*LLR	431.1		805.4	
% pred.	75.9		72.6	

Entries in the table are maximum-likelihood estimates probit with standard errors below. * indicates statistical significance at the $p = 0.10$ level and ** indicates significance at the $p = 0.05$ level, both one-tailed tests. Columns headed \mathcal{D} give the “first differences” as discussed in text.

Table 4: Probability of Correct Recall
Dependent Variable (Accuracy of Recall):

Independent Variables:	House	\mathcal{D}	Pooled Senate	\mathcal{D}
Constant	-1.25** (0.73)		-4.86* (3.56)	
Media Attn.	-0.83** (0.45)	-0.15	-0.02 (0.27)	-0.008
Pol. Info.	0.55 (0.65)	0.12	1.50** (0.43)	0.55
Efficacy	0.08 (0.40)	0.02	-0.25 (0.27)	-0.10
Education	0.14** (0.04)	0.70	0.07** (0.02)	0.45
Evaluation	0.15 (0.17)	0.03	-0.06 (0.12)	-0.02
Agreement	-0.05 (0.18)	-0.01	-0.18* (0.11)	-0.07
Salience	0.12 (0.19)	0.03	-0.02 (0.12)	-0.13
Party	0.43** (0.19)	0.11	-0.09 (0.12)	-0.03
Ideol. Extreme	-0.03 (0.19)	-0.006	0.003 (0.12)	0.001
Tenure	-0.02** (0.01)	-0.04	-0.01* (0.009)	-0.04
Last Election			0.03 (0.04)	-0.05
Electoral Margin	0.004 (0.006)	0.03	0.007 (0.007)	0.13
Senator			0.60** (0.13)	
-2*LLR	63.1		165.9	
% pred.	76.1		77.6	

Entries in the table are maximum-likelihood probit estimates with standard errors below. * indicates statistical significance at the $p = 0.10$ level and ** indicates significance at the $p = 0.05$ level, both one-tailed tests. Columns headed \mathcal{D} give "first differences" as discussed in text.

Table 5: Probability of Correct Guess
Dependent Variable (Accuracy of Guess):

Independent Variables:	House	\mathcal{D}	Pooled Senate	\mathcal{D}
Constant	-0.07 (0.39)		-8.03** (2.35)	
Media Attn.	-0.59** (0.21)	-0.18	-0.13 (0.15)	-0.05
Pol. Info.	0.46* (0.37)	0.16	0.36** (0.26)	0.14
Efficacy	0.27 (0.23)	0.09	0.15 (0.16)	0.05
Education	-0.01 (0.02)	-0.06	0.03** (0.01)	0.19
Evaluation	-0.01 (0.10)	-0.003	0.02 (0.07)	0.007
Agreement	0.32** (0.10)	0.12	-0.06 (0.07)	-0.02
Salience	0.07 (0.10)	0.02	-0.006 (0.07)	-0.002
Party	0.17** (0.10)	0.06	0.16** (0.08)	0.06
Ideol. Extreme	0.32** (0.10)	0.10	-0.070 (0.08)	-0.03
Tenure	-0.01** (0.007)	-0.03	-0.0000 (0.006)	-0.0003
Last Election			0.09** (0.03)	-0.14
Electoral Margin	-0.0003 (0.003)	-0.005	-0.01** (0.004)	-0.19
Senator			0.22** (0.08)	
-2*LLR	280.5		385.2	
% pred.	62.9		60.2	

Note: Entries in the table are probit maximum-likelihood estimates with standard errors below. * indicates statistical significance at the $p = 0.10$ level and ** indicates significance at the $p = 0.05$ level, both one-tailed tests. Columns headed \mathcal{D} give "first differences" as discussed in text.

References

- Achen, Christopher H. 1975. "Mass Political Attitudes and the Survey Response." *American Political Science Review*, 69:1218-1231.
- Aldrich, John H. and Forrest D. Nelson. 1984. *Linear Probability, Logit, and Probit Models*. Beverly Hills: Sage Publications, Inc.
- Aldrich, John H., John L. Sullivan, and Eugene Borgida. 1989. "Foreign Affairs and Issue Voting: Do Presidential Candidates 'Waltz Before a Blind Audience?'" *American Political Science Review*, 83:1, 123-142.
- Alvarez, R. Michael. 1992. *Issues and Information in Presidential Elections*. Ph. D. Dissertation, Duke University, November 1992.
- Alvarez, R. Michael and Charles H. Franklin 1992. "Survey Measures of Perceptual Uncertainty." Paper presented at the 1992 American Political Science Association Annual Meetings, Chicago IL.
- Bartels, Larry. 1991. "Constituency Opinion and Congressional Policy Making: The Reagan Defense Buildup." *American Political Science Review*, 85: 457-474.
- Congressional Quarterly Weekly Report*, March 23, 1991. Washington, D.C.: CQ Press.
- Conover, Pamela Johnston and Stanley Feldman. 1989. "Candidate Perception in an Ambiguous World: Campaigns, Cues, and Inference Processes." *American Journal of Political Science*, 33:912-940.
- Converse, Philip E. 1964. "The Nature of Mass Belief Systems." In David Apter (ed), *Ideology and Discontent*. Glencoe, IL: Free Press.
- Dubin, Jeffrey A. and R. Douglas Rivers. 1992. *Statistical Software Tools*. Pasadena, CA: Dubin-Rivers Research.
- Fenno, Richard F. 1978. *Home Style*. New York: Little Brown.
- Franklin, Charles H. 1993. "Is Talk Cheap? Words and Deeds in U.S. Senate Campaigns." Madison, WI: Manuscript, February 1993.
- Franklin, Charles H. 1991. "Eschewing Obfuscation? Campaigns and the Perception of U.S. Senate Incumbents." *American Political Science Review*, 85: 1193-1214.
- Graham, Thomas W. 1989. "The Politics of Failure: Strategic Nuclear Arms Control, Public Opinion, And Domestic Politics in the United States — 1945-1980." Unpublished PhD Dissertation. Boston, MA: MIT.

- Hibbs, Douglas A. 1987. *The American Political Economy*. Cambridge, MA: Harvard University Press.
- Holsti, Ole. 1992. "Public Opinion and Foreign Policy: Challenges to the Almond-Lippmann Consensus." Paper prepared for the Annual Meeting of the International Studies Association, Atlanta, GA.
- Iyengar, Shanto and Donald R. Kinder. 1987. *News That Matters*. Chicago: University of Chicago Press.
- Kernell, Samuel. 1978. "Explaining Presidential Popularity." *American Political Science Review*, 72: 506-522.
- Kinder, Donald and David O. Sears. 1985. "Public Opinion and Political Action," in Lindzey and Aronson (eds), *The Handbook of Social Psychology* 4th Ed. New York: Random House.
- Kinder, Donald R. and David O. Sears. 1985. "Public Opinion and Political Action." In G. Lindzey and E. Aronson (eds), *The Handbook of Social Psychology*, 3rd Edition. New York: Random House.
- King, Gary. 1989. *Unifying Political Methodology*. New York: Cambridge University Press.
- Krosnick, Jon A. and Donald R. Kinder. 1990. "Altering the Foundations of Support for the President Through Priming." *American Political Science Review*, 84: 497-512.
- Lodge, Milton, Kathleen M. McGraw, Patrick Stroh. 1989. "An Impression-driven Model of Candidate Evaluation." *American Political Science Review*, 83: 399-420.
- MacKuen, Michael B. 1983. "Political Drama, Economic Conditions, and the Dynamics of Presidential Popularity." *American Journal of Political Science*, 27: 165-192.
- McGuire, W.J. 1968. "The Nature of Attitudes and Attitude Change." In Lindzey and Aronson (eds), *Handbook of Social Psychology* 2nd Ed. Reading, MA: Addison-Wesley.
- McCullagh. P. and J.A. Nelder. 1991. *Generalized Linear Models*, second edition. New York: Chapman and Hall.
- Mueller, John E. 1973. *War, Presidents, and Public Opinion*. New York: Wiley.
- Page, Benjamin I. and Robert Y. Shapiro. 1983. "Effects of Public Opinion on Policy." *American Political Science Review*, 77: 175- 190.

- Peffley, Mark A. and Jon Hurwitz. 1992. "International Events and Foreign Policy Beliefs: Public Responses to Changing Soviet-American Relations." *American Journal of Political Science*. Forthcoming.
- Powell, Linda W. 1989. "Analyzing Misinformation: Perceptions of Congressional Candidates' Ideologies." *American Journal of Political Science*, 33:1, 272-293.
- Rahn, Wendy M. 1990. *Perception and Evaluation of Political Candidates: A Social-Cognitive Perspective*. Ph. D. Dissertation, University of Minnesota, December 1990.
- Rahn, Wendy M. John H. Aldrich, Eugene Borgida, and John L. Sullivan. 1992. "A Social-Cognitive Model of Candidate Appraisal." In John A. Ferejohn and James H. Kuklinski, *Information and Democratic Processes*. Urbana: University of Illinois Press.
- RePass, David E. 1971. "Issue Salience and Party Choice." *American Political Science Review*, 65: 389-400.
- Sherif, M. and C. W. Sherif. 1967. "Attitude as the Individual's Own Categories: The Social Judgement-Involvement Approach to Attitude and Attitude Change." In Sherif and Sherif (eds), *Attitude, Ego-Involvement, and Change*. New York: Wiley.
- Stimson, James. 1990. "A Macro Theory of Information Flow," in J. Ferejohn and J. Kuklinski (eds), *Information and Democratic Processes*. Urbana, IL: University of Illinois Press.
- White, H. 1980. "A heteroskedasticity-Consistent Covariance Matrix Estimator and A Direct Test for Heteroskedasticity." *Econometrica* 50: 483-499.
- Zaller, John R. 1992. *The Nature and Origins of Mass Opinion*. New York: Cambridge University Press.